

6.0 HISTORY AND CURRENT USAGE

6.1 GENERAL HISTORY

6.1.1 AREA 8

In 1915 President Woodrow Wilson ordered 1,160 acres in Alabama reserved for military purposes, which soon became Fort McClellan. The Department of the Army established the Army Chemical Training Center at Fort McClellan in 1951 and academic instruction began at the U.S. Army Chemical Corps School in September 1952. The Radiological Safety Support Unit, established in 1953, was an organizational element of the Army Chemical Training Center at Fort McClellan. The Rad Unit, as it was commonly called, conducted radiological tests and research and development, which aided in the development of training and tactical doctrine. In 1963 the name of the U.S. Army Chemical Corps School changed to the U.S. Army Chemical Center and School (Brief 1954; Rosell 1960; St. Louis 1998).

Radiological training began at Fort McClellan in 1952. The original Radiological Laboratories were located in Post Area No. 8 and consisted of five buildings: T-810, T-811, T-812, T-836 & T-837 (Old T-836A). A concrete vault (T-812½) was used for the storage of radioactive materials, primarily Radium and Cobalt⁶⁰ (Radiological Defense Laboratories 1952).

6.1.2 RATTLESNAKE GULCH AREA

In 1952, field training in Radiological Surveys was initiated. The first course area was known as Rattlesnake Gulch and used 48 Curies of Cobalt⁶⁰ in sources of 2 to 4 Curies each. The course was located south of Summerall Gate Road near the western edge of main post. Approval was also granted for the use of 10 sources of Cobalt⁶⁰ to be used for the CBR Familiarization Course at Pelham Range (Isotopes Committee Meeting (ICM) #4).

In 1953, the Rattlesnake Gulch Survey Area was moved closer to Summerall Gate Road and re-named as Radiological Survey Area #1. A radioactive waste burial ground was established and designated as the Chemical School Radioactive Burial Ground with the following limitations:

1. All waste to be burned and sealed in bleach cans before burial.
2. No isotope of longer half-life than 90 days is to be buried.
3. The burial site is to be well marked with large "civilian type" signs.
4. All burials are to be recorded in the Health Physics Office as a permanent record.

In later years both the Radiological Survey Area #1 and Chemical School Radioactive Burial Ground were referred to as being part of the Rattlesnake Gulch Area. Radioactive waste from the first Rattlesnake Gulch Survey area was removed and buried in the new Chemical School Radiological Burial Ground. (ICM #7, 1953)

In the early 1950's a Field Hot Cell was constructed near Radiological Survey Area #1. The Field Hot Cell was constructed with blocks and sandbags and was used until a second Temporary Hot Cell was built in the Radiological Lab Building (Bldg. 3182). The Field Hot Cell was located near Summerall Gate Road, close to the fence of the Biological Training Area (Anderson 1971; Powell 1955).

During 1954 at least thirteen containers of radioactive waste were buried in the burial area. A radiological survey indicated that the radiation dose-rate at surface level at all points within the burial area did not exceed 7.5 mr/hr (Carroll 1954).

On 3 January 1955, two Cobalt⁶⁰ shipping containers were buried in six-foot pipes at the school burial ground. The Rad Unit buried radioactive tantalum and container in the Chemical Corps School Radioactive Materials Burial Ground on 18 October 1955. (Wood 1955)

In 1956, Radiological Survey Area #1 was re-configured with new grid lines and a new source pattern was planned (ICM #17, 1956).

A May 1957 Radiation Protection Survey performed by the USA Environmental Health Laboratory recommended making the Chemical School Radiological Burial Ground (Rattlesnake Gulch Area) inaccessible to children and that it be decontaminated. The Chemical School Radiological Burial Ground (Rattlesnake Gulch Area) at the time was surrounded by a 3 strand barbed wire fence. A new fence was to be built to encircle the existing one. The new fence was to consist of a 6' fence of hog wire topped by 3 strands of barbed wire and be built in September. By June of 1957 it was recommended that parts of the Chemical School Radiological Burial Ground (Rattlesnake Gulch area) be dug up and either shipped off post or re-buried at the Pelham Range burial ground. Work on digging up the burials was delayed due to the presence of water being in the pits (ICM #25, 1957; ICM #26, 1957; Johnson 1958; Progress Report 1957).

In August 1958, a granite marker was received for the radioactive materials burial ground (Rattlesnake Gulch Area). The marker was inscribed with the date the burial area was closed, the types and amounts of radioisotopes buried and the organization performing the burial. The After Action Report (AAR) on the 1971 clean up of this area does not indicate that this marker was present. An interview in the same report indicates that materials were removed around the 1958 timeframe and moved to the Pelham Range burial grounds (Knight, August 1958; Anderson 1971).

In 1971, Health Physics Division personnel removed radioactive waste from the Chemical School Radioactive Burial Grounds. In writing his After Action Report, Major Anderson calls the site Iron Mountain, due to its location near Iron Mountain. Remnants of the Field Hot Cell (Concrete Block and Sandbags) were also discovered buried on this site (Anderson 1971).

6.1.3 AREA 31

The Army Chemical School established the Radiological Facilities that included a Radiological Laboratory (Building 3182), a Nuclear Accident Training Facility (Alpha Field behind Building 3165). Other new buildings included the Radiological Laboratory (Building 3180), a Radiological Decontamination Training Facility (Bromine Field), a Personnel Decontamination Center (Building 3185), and an Isotope and Scaler Laboratory (Building 3181).

A second Temporary Hot Cell was constructed in the Radiological Laboratory Building to replace the temporary Field Hot Cell. In 1958, the Temporary Hot Cell in the Radiological Laboratory Building was dismantled (Isotope Committee Meeting 1958). The minutes of an Isotope Committee Meeting of 19 November 1958 states that the area had been monitored and found free of contamination (Knight, November 1958).

The second Temporary Hot Cell was replaced by the Hot Cell Facility (Building 3192). The new Hot Cell was connected to an underground drainage system leading to two underground storage tanks. A liquid waste disposal pit was also connected. Radioactive sources were sealed and leak tested at the Alpha Field. Training at the Hot Cell included Cobalt⁶⁰ sources. After the Chemical School closed in 1973, the Hot Cell had numerous decommissioning activities and was released by the NRC in 1998.

Training at the Radiological Laboratory (Building 3182) included radioactive sources and after 1973, the Fort McClellan Military Police used the building later for a museum, office space and classrooms.

The U.S. Army Chemical Center and School staff stored radioactive material in the Radioactive Vault (Building 3180). Building 3180 was demolished in 1989. Military personnel also used an additional radiological storage vault at building T-812½.

Training at the Bromine Field included decontamination of vehicles and personnel. Bromine tanks, used to store contaminated wastewater, were removed from the site in the late 1990's. The Navy also participated in Bromine Field training. Part of the Bromine Field activity included the 11F3A Facility. Located at the Bromine Field, the 11F3A Facility was used for de-contaminating military items (jeep, plane, etc.) in a controlled radiological training environment. Soldiers used Building 3185 as a Personnel Decontamination Center. Radiation sources were routinely present at the Isotope and Scaler Laboratory, Building 3181 (Lutz 1966; U.S. Army Chemical Center and School 1964).

The U.S. Army Chemical School also set up a Radioactive Waste Storage Yard in the Radiological Facilities Area. They temporarily stored Cobalt⁶⁰ sources in 3 ton and 5 ton containers (U.S. Army Corps of Engineers 1990).

The U.S. Army Chemical School at Fort McClellan closed the Radiological Facilities in 1972 and removed the radioactive sources from all buildings and facilities. The Chemical Corps School was deactivated in 1973 (Baldino 1973).

6.1.4 RANGE 25

The U.S. Army Chemical School staff directed actuator tests on Range 25 (Old Bandholtz KD Range) on main post in 1963. The 12-week tests, which included Cobalt⁶⁰ sources, helped the staff decide on major source well actuator purchases (Mayfield 1963; Speer 1963).

6.1.5 CHEMICAL SCHOOL BUILDINGS 1979-1999

After the U.S. Army Chemical School returned to Fort McClellan in 1979, the Edwin R. Bradley Radiological Laboratory (Building 2281) became the focus of radiation training where isotope sources were present. The U.S. Army Chemical School also stored radioactive materials in Building 4416 (Thomassy 1988). The Radiological Calibration Facility was located in Building 228. Sibert Hall (Building 1081) was the last home to the nuclear, biological and chemical mission at Fort McClellan and included a radiological laboratory. These buildings were used up until the U.S. Army Chemical School closed and left Fort McClellan in 1999.

6.1.6 STORAGE, MAINTENANCE AND CALIBRATION BUILDINGS

During the history of Fort McClellan a variety of buildings have been used for general storage, calibration of equipment and vehicle maintenance that involve radioactive materials. These items would include Lensetic Compasses and Radium Dials used in vehicles. Storage Buildings include Buildings 256, 257, 303A, 341 & 345. Building 228 was used as a radiological calibration facility for Test Measuring and Diagnostic Equipment (TMDE) from the 1950's to the 1980's. Vehicle Maintenance Buildings include Buildings 335, 337, 338, 339 & 350 (Environmental Baseline Survey 1998).

6.1.7 LICENSES

In 1957, the U.S. Atomic Energy Commission began issuing Byproduct Material Licenses to the U.S. Army Chemical School at Fort McClellan for activities at Pelham Range Area and on main post. From 1957 to 1972 Fort McClellan had two licenses 01-02861-01 and 01-02861-02. The Atomic Energy Commission amended license number 01-02861-01 seventeen times and license number 01-02861-02 four times. Both of the licenses were renewed in 1972 with an expiration date of 1977. In 1959 the U.S. Army Chemical School received a Special Nuclear Material License No. SNM-344 for U-233 and plutonium. After the U.S. Army Chemical Corps School reopened at Fort McClellan in 1979, the Atomic Energy Commission issued license 01-02861-04. This license was amended, renewed and extended for several years and was terminated by the NRC in 1998. (Morgan 1957; Schwertner 1972; Layfield 1971; McAlduff 1970).

In 1960, the Atomic Energy Commission and U.S. Army Chemical Center and School entered into an Interagency Agreement for Enriched Uranium (SNM Interagency Agreement No. 1003) at Fort McClellan (McAlduff 1970). In 1971, the U.S. Atomic Energy Commission and the U.S. Army Chemical Center and School entered into agreement (No. 3039) for plutonium management at Fort McClellan (Craig 1971).

Additional information on Fort McClellan Licenses may be found in Appendix D of this report.

6.2 CURRENT USAGE

The Fort McClellan Transition Force is currently transferring Fort McClellan assets to new users. Radiological Areas will be surveyed prior to being released.

6.3 ADJACENT LAND USAGE

Most of the radiological sites are contained within the boundaries of Fort McClellan. Parts of the Rattlesnake Gulch area including part of the Chemical School Radiological Burial Grounds are located on the Anniston Community Center land (City of Anniston) in an area used for hiking. This land was expropriated during the 1970's.